

## **Appendix R — Preliminary Multi-resource Staff Analysis of ACEC Proposed Designations from the Sierra Club of Wyoming for Several Areas in the Buffalo Field Office (BFO), September 2002**

**T**he Sierra Club of Wyoming has petitioned the BFO to nominate the following areas for designation as outlined in the Bureau's 1617.8 Manual guidelines for Designation of Areas of Critical Environmental Concern, (ACEC). The areas are:

- Pumpkin Buttes
- Dry Creek Petrified Tree
- Hell's Half Acre
- Fortification Creek Elk Area
- Cantonment Reno
- Face of the Bighorns
- Hole-In-The-Wall

The BFO also must evaluate any newly acquired lands for ACEC if they meet the criteria. The Cow Creek Breaks is an area acquired in 2001 through exchange that was evaluated.

Before an area is nominated for ACEC designation the area must meet both the relevance and importance criteria (43 CFR 1610.7-2) and BLM Manual 1613, to become eligible for further consideration. Relevance and importance are defined as follows:

- (1) **Relevance:** Where special management potential is required to protect and prevent irreparable damage to important historic, cultural or scenic values, fish and wildlife resources or other natural systems or processes or to protect life and safety from natural hazards.
- (2) **Importance:** A resource is important if it has qualities that give it special worth, meaning, distinctiveness, or cause for concern, especially when compared to any like or similar resources. It also must be more-than- logically significant. Qualities or circumstances that make such a resource fragile, sensitive, rare, irreplaceable, endangered, threatened or vulnerable to adverse change may be among the reasons management action is appropriate.

An Area meets the "relevance" criterion if it contains one or more of the following:

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

2. A fish and wildlife resource (including but not limited to endangered, sensitive or threatened species or habitat essential for maintaining species diversity).
3. A natural process or systems (including but limited to habitat for endangered, sensitive or threatened plant species: rare plant or plant communities; or rare geologic features).
4. Natural hazards (including but not limited to areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity or dangerous cliffs). A hazard caused by human action may meet the relevance criteria if it is determined through the resource management planning process that it has become part of a natural process.

An area meets the “importance” criterion if it further meets one or more of the following:

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource.
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA.
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare.
5. Poses a significant threat to human life and safety or to property.

Table R–1 shows the areas that have been identified based on comments received and internal interdisciplinary staff analysis. The BLM relevance and importance determinations are also listed.

Of the eight areas reviewed, the BLM administered lands on three areas were found to not meet the criteria and were dropped from further consideration. The BLM administered lands on 5 proposed ACECs were found to meet the criteria and were retained for further consideration.

## ACEC Analysis for the Buffalo Field Office

The following is a narrative description of proposed ACEC areas in the Buffalo Field Office.

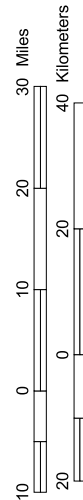
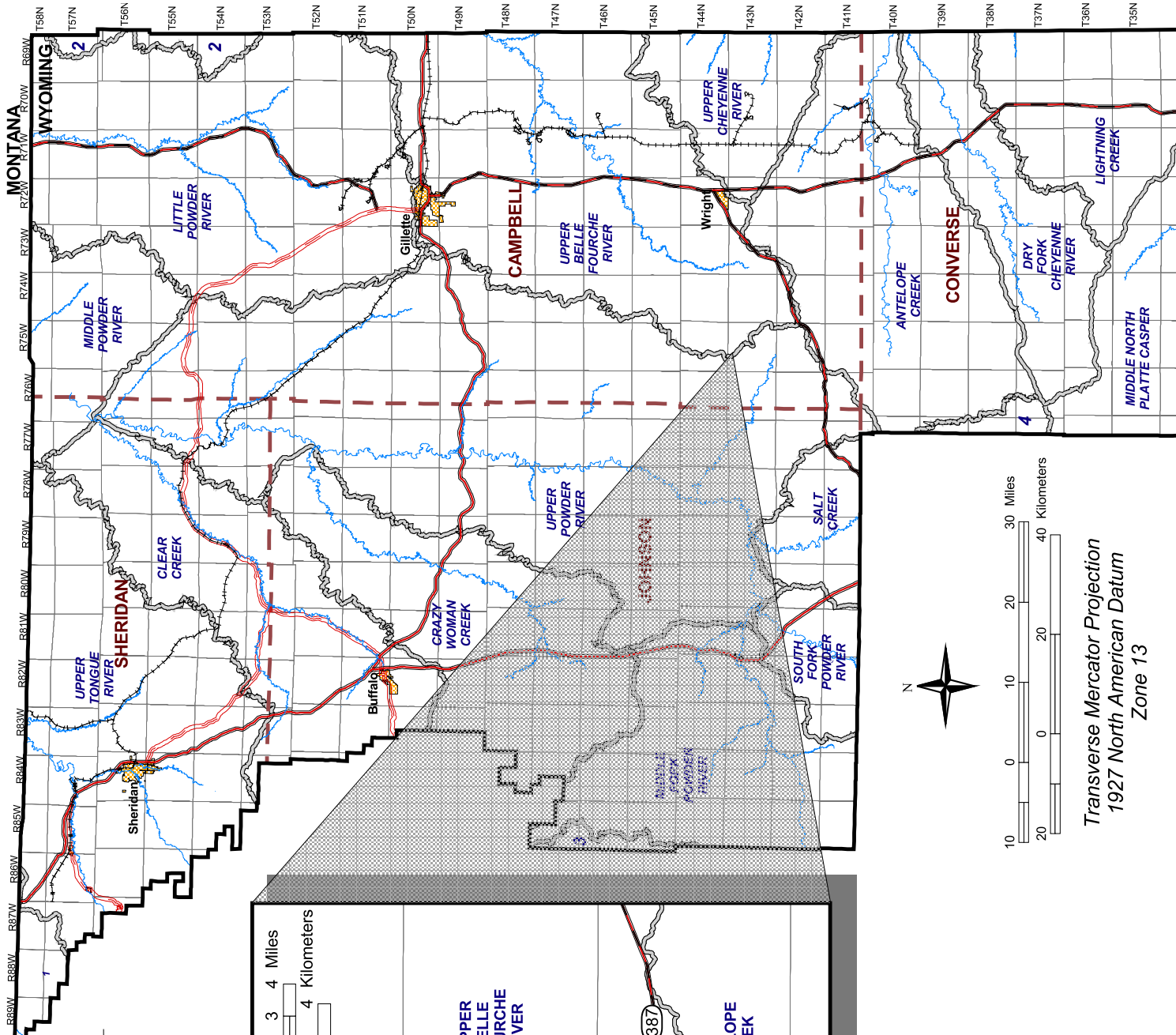
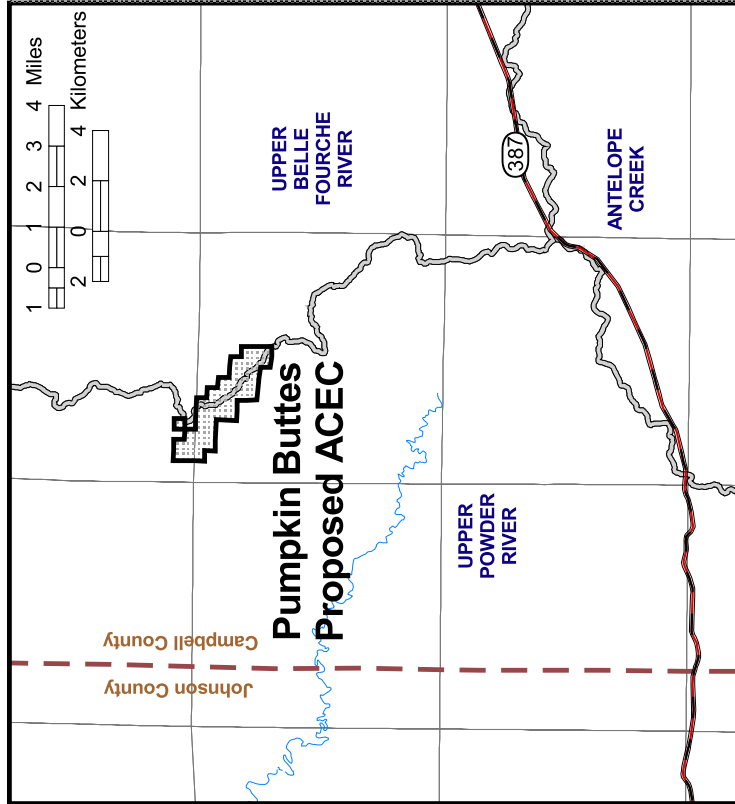
### Pumpkin Buttes

The north and south Middle Butte are the only portion of the Pumpkin Buttes in Federal ownership. The buttes are located approximately 45 miles southwest of Gillette, Wyoming (Figure R–1). The butte rises about 800 feet from the surrounding landscape and are the only significant geologic uplift for several miles. There is no public access to the Middle Buttes. The south middle butte is used as

# LEGEND

- Sub-Watershed Boundary
- River/Stream
- Railroad
- Interstate Highway
- U.S. Highway
- State Highway
- County Boundary

- Sub-Watershed
- 1--Little Bighorn River
- 2--Little Missouri River
- 3--North Fork Powder River
- 4--Salt Creek



Transverse Mercator Projection  
1927 North American Datum  
Zone 13

## POWDER RIVER BASIN OIL & GAS PROJECT FEIS

### FIGURE R-1 PUMPKIN BUTTES PROPOSED ACEC

ANALYSIS AREA: Campbell, Converse, Johnson & Sheridan Counties, Wyoming	ArcView File: C:\1011_v1\data\acec.apr
DATE: 09/24/02	Layout--Pumpkin Buttes
	DRAWN BY: MSH

an administrative communication site for several radio towers. There is an active golden eagle and prairie falcon nest on top of the butte. There is indication of past native American occupation on the butte, and was probably used as a land mark by early settlers in the area. There are several mining claims for uranium and oil and gas exploration and development around the base of the buttes. No mining or energy development has occurred on the slopes or top of the buttes. Wildlife common to the area include mule deer, antelope, sage grouse, coyote, bobcat, raptors and numerous song birds. Bald eagles frequent the buttes in the winter. There are no threatened or endangered or proposed species or habitat on the butte. Sensitive species that may occur include: Sage grouse, loggerhead shrike, brewer's sparrow, sage sparrow. Pumpkin Buttes meets the relevance criteria for important historic, (used by early pioneers as a landmark destination) scenic and geologic features (only large uplift east of the Powder River).

**Table R-1 Evaluation of ACEC Relevance and Importance Criteria**

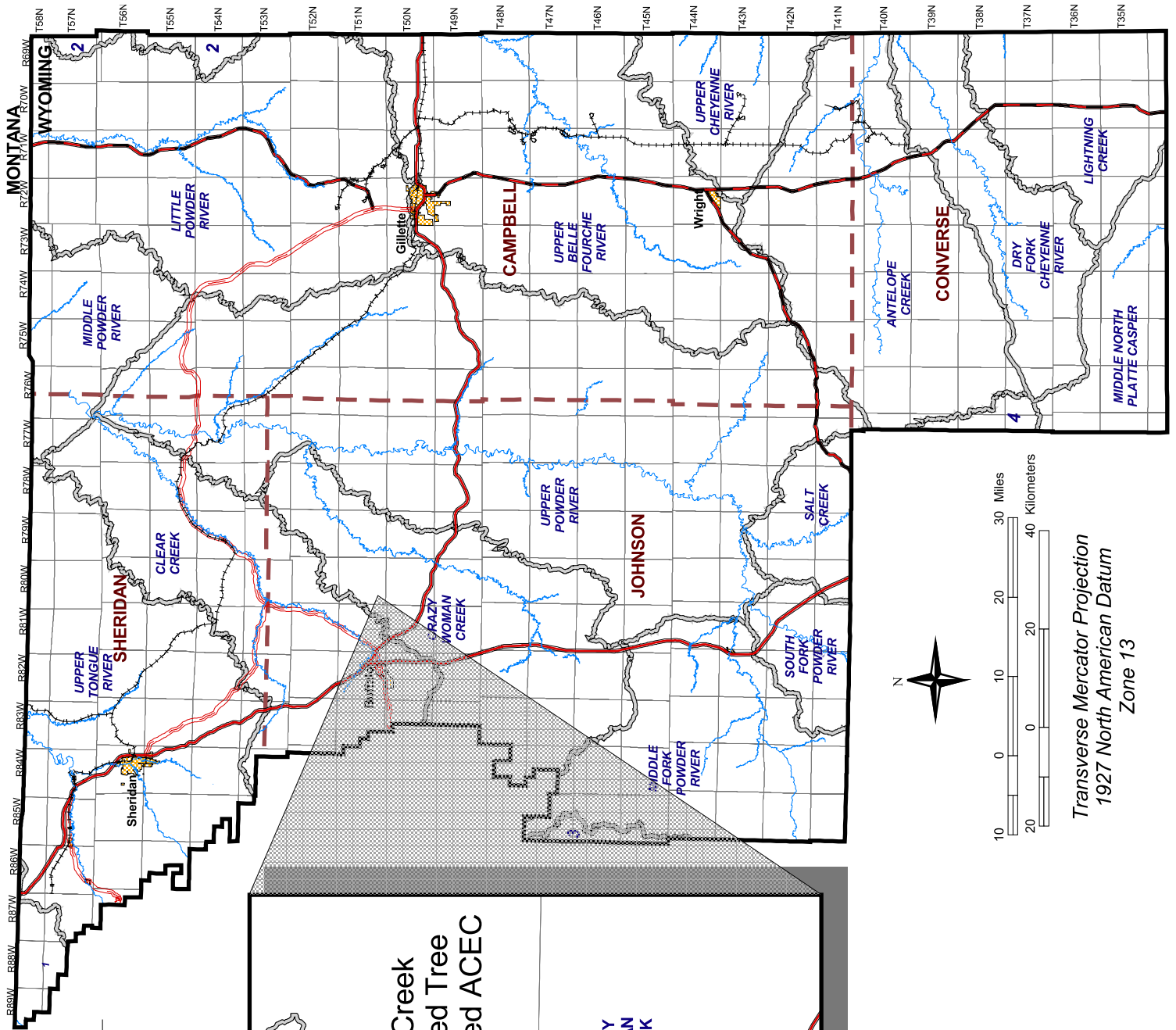
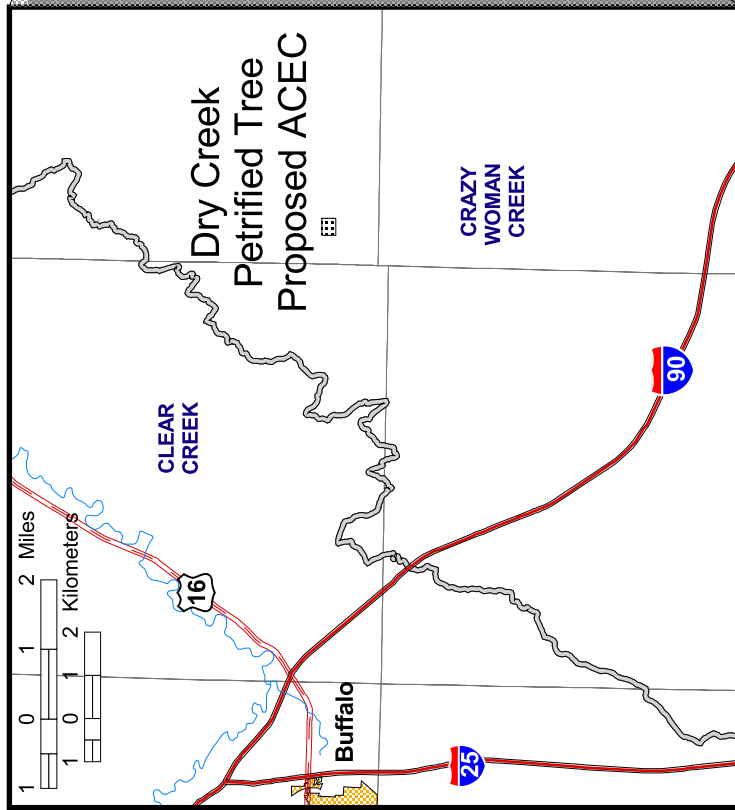
Existing or Proposed ACECs	Recommended	Comments (Relevance and Importance Criteria)
Pumpkin Buttes	Yes	May meet the relevance criteria for cultural values. May meet importance criteria for Native American religious sites pending consultation with affected tribes.
Dry Creek Petrified Tree	Yes	Meets relevance criteria for geologic features as well as importance criteria for local significance and qualities that are rare.
Hell's Half Acre	No	Meets relevance criteria for scenic values but does not meet importance criteria.
Fortification Creek Area	Yes	Meets relevance criteria for scenic and wildlife resources as well as importance criteria for local significance, and national concerns, and fragile watershed
Cantonment Reno	Yes	Meets relevance criteria for historic values as well as importance criteria for local and national significance.
Face of the Bighorns	No	Does not meet relevance or importance criteria.
Hole-In-The-Wall	Yes	Meets relevance criteria for cultural and scenic values and importance criteria for local and national significance, are unique, and have public concerns for management.
Cow Creek Breaks	Yes	Meets relevance criteria for scenic, important geologic features and fragile watershed and importance criteria for local qualities; national priority concerns; and have public concerns for management

## Dry Creek Petrified Tree

The Dry Creek Petrified Tree area is a 40-acre environmental education site, located about 8 miles east of Buffalo, Wyoming (Figure R-2). The site has public access, interpretive trail, outhouse, picnic table. The area is used by tourists, local schools, and hunters. Although Petrified wood is common in the Powder River breaks area, there are limited public access sites. Little vandalism has occurred to the site during 20 years. The area meets relevance criteria for unique geologic feature, and importance for local significance, (used as an educational and tourist attraction).

# LEGEND

- Sub-Watershed Boundary
- River/Stream
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- 1--Little Bighorn River
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POWDER RIVER BASIN OIL & GAS PROJECT FEIS	
FIGURE R-2 DRY CREEK PETRIFIED TREE PROPOSED ACEC	
ANALYSIS AREA: Campbell, Converse, Johnson & Sheridan Counties, Wyoming	
DATE: 09/24/02	ArcView File: C:\1011_v1\data\acec.apr
DRAWN BY: MSH	

Transverse Mercator Projection  
1927 North American Datum  
Zone 13

## **Hell's Half Acre**

Hell's Half Acre canyon is a block of about 1,900 acres of public land in northern Sheridan County, approximately 46 miles northeast of Sheridan (Figure R-3). There is no public access to the area. The site is typical Powder River breaks rough, topography, with steeply incised gullies, scoria and sandstone buttes and scattered ponderosa pine/sagebrush stands. The canyon is not atypical of other deeply incised drainages in the area. The area is remote and is only utilized by hunters during the fall. Livestock grazing is the primary land use. Common species of wildlife include mule deer, wild turkey, raptors, coyote, bobcat. The area meets the relevance criteria for scenic value (remote incised terrain).

## **Fortification Creek Elk Area**

The Fortification Creek nominated area (Figure R-4) includes the Fortification Creek WSA and lies within the Fortification Creek Special Management Area. The area is bisected by numerous drainages and scoria uplifts. Typical vegetation is sagebrush/grassland bottoms with extensive juniper uplands and drainages. A herd of approximately 200 elk have occurred in the area since the 1950s, as a result of releases from Yellowstone National Park. Elk have historically occurred in the area. Elk have stayed in the area because of the lack of public access. The elk habitat is threatened by encroaching coal bed methane development. Other wildlife includes mule deer, antelope, coyote, bobcat, sage grouse, sharp-tailed grouse, raptors and numerous songbirds. The area meets relevance criteria for scenic value and wildlife. It also meets the importance criteria for local significant qualities (only area in Campbell County with wilderness characteristics); has circumstances that make it fragile, and unique (plains elk herd, and minimal impacts from man); and has been recognized as warranting protection to satisfy national priority concerns.

## **Cantonment Reno**

This site is an approximately 480 acre public land site of an historic army fort on the Bozeman trail adjacent to the Powder River (Figure R-5). It is one of few forts located on public land. There are no historic buildings left. The site meets relevance criteria, (significant historic value) and importance criteria, (having locally significant qualities, which give it special worth).

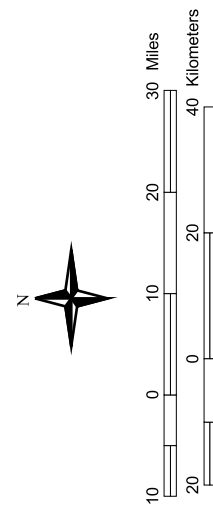
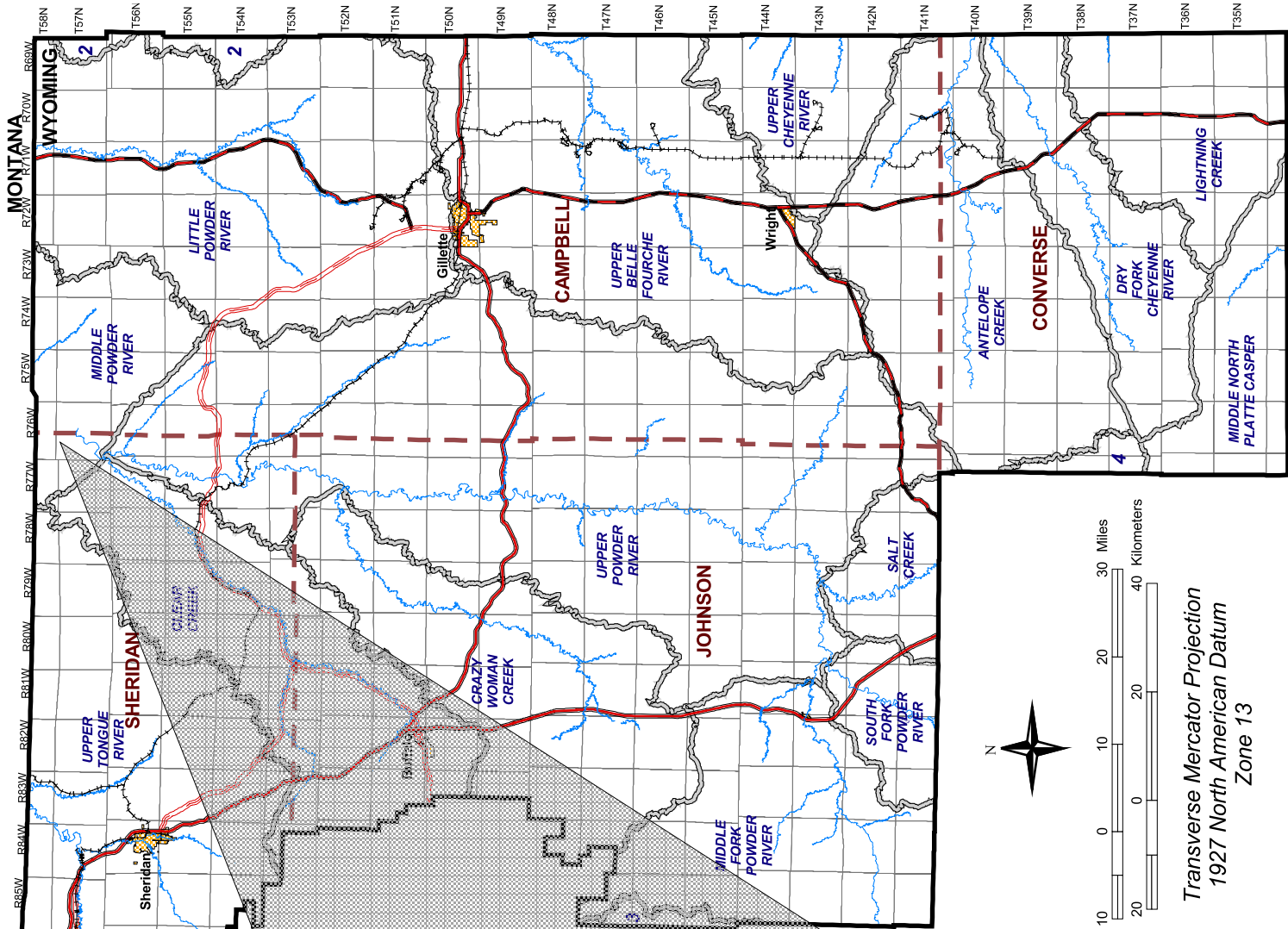
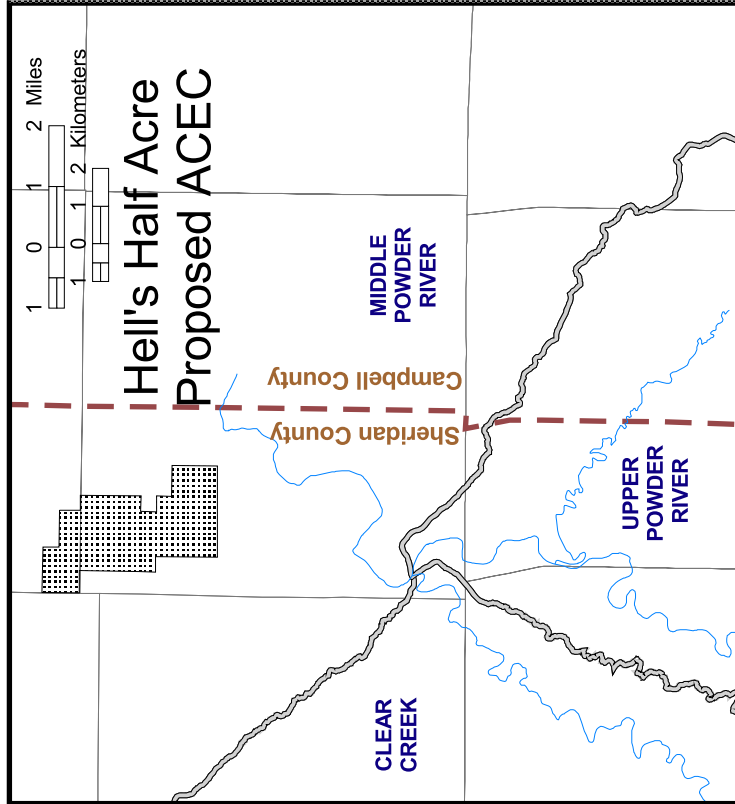
## **Face of the Bighorns**

The Face of the Bighorns is a string of public land, south of the Big Horn National Forest, that is about 15 miles in length (Figure R-6). The "Face" is a lodgepole and ponderosa pine steep uplift with limited public access. Because of the steep topography and limited access, management for recreation, timber or wildlife is limited. The Face is extremely susceptible to wild fire due to slope, lack of access and fuel loading. The Face is somewhat unique due to the lack of roads, but does not meet the relevance or importance criteria.

# LEGEND

- Sub-Watershed Boundary
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- 1--Little Bighorn River
- 2--Little Missouri River
- 3--North Fork Powder River
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Transverse Mercator Projection  
1927 North American Datum  
Zone 13

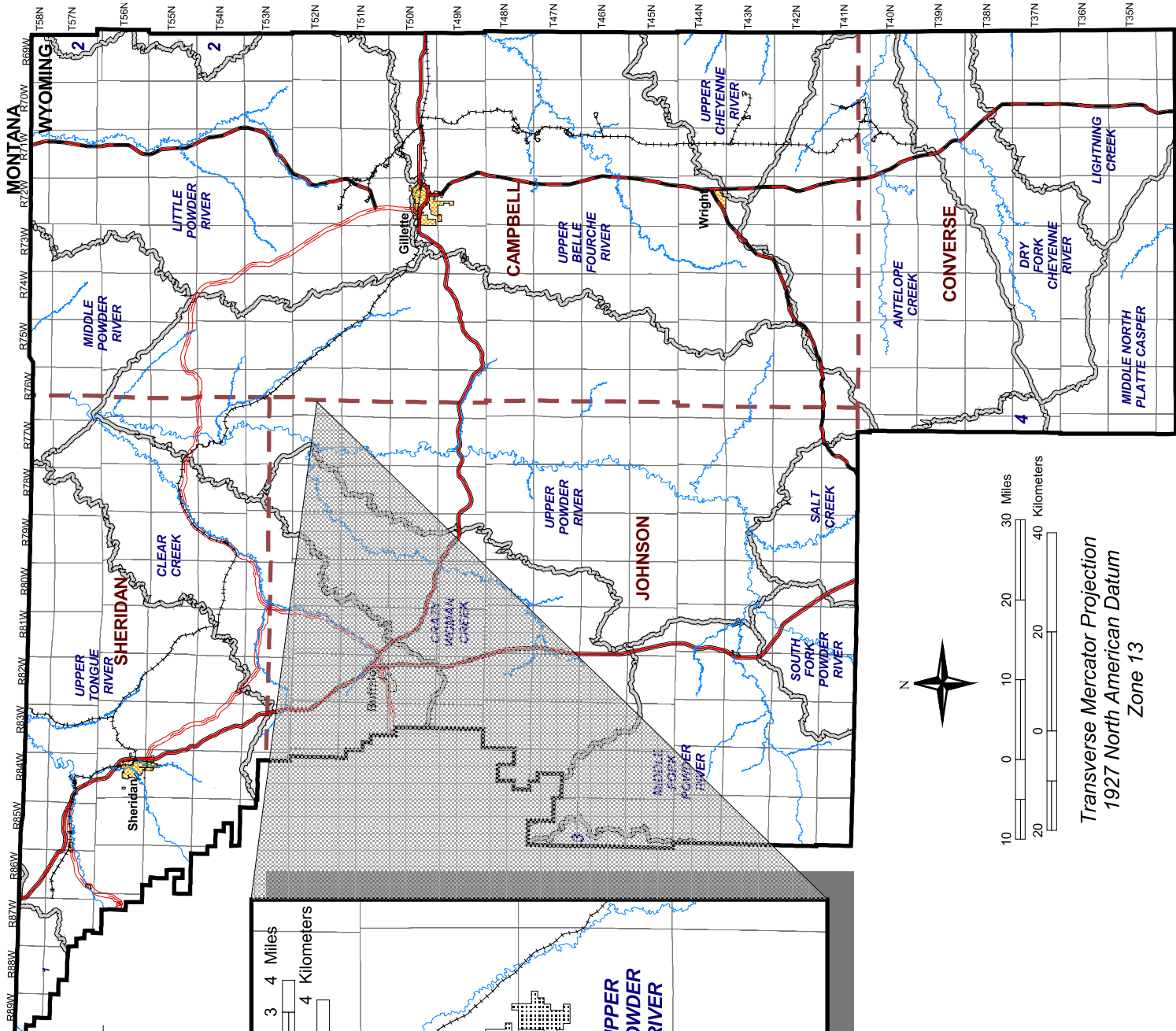
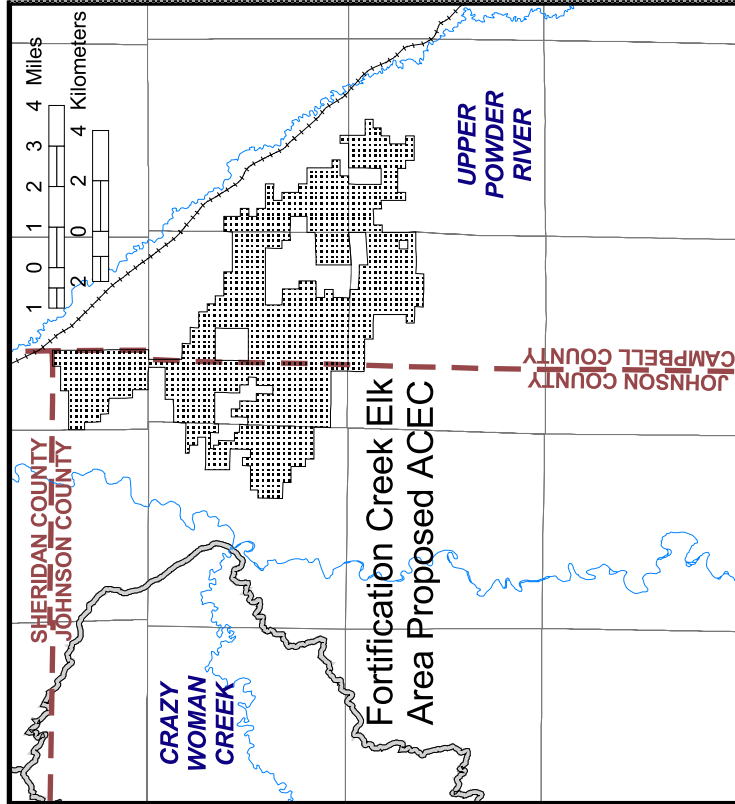
POWDER RIVER BASIN OIL & GAS PROJECT FEIS	
FIGURE R-3 HELL'S HALF ACRE PROPOSED ACEC	
ANALYSIS AREA: Campbell, Converse, Johnson & Sheridan Counties, Wyoming	ArcView File: C:\1011_v1\data\acec.apr
DATE: 09/24/02	Layout--Hell's Half Acre
DRAWN BY: MSH	



# LEGEND

- Sub-Watershed Boundary
- River/Stream
- Railroad
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- U.S. Highway
- State Highway
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1927 North American Datum  
Zone 13

POWDER RIVER BASIN OIL & GAS PROJECT FEIS	
FIGURE R-4 FORTIFICATION CREEK ELK AREA PROPOSED ACEC	
ANALYSIS AREA: Campbell, Converse, Johnson & Sheridan Counties, Wyoming	
DATE: 09/24/02	ArcView File: C:\1011_V1\data\acec.apr Layout--Fortification Creek
DRAWN BY: MSH	

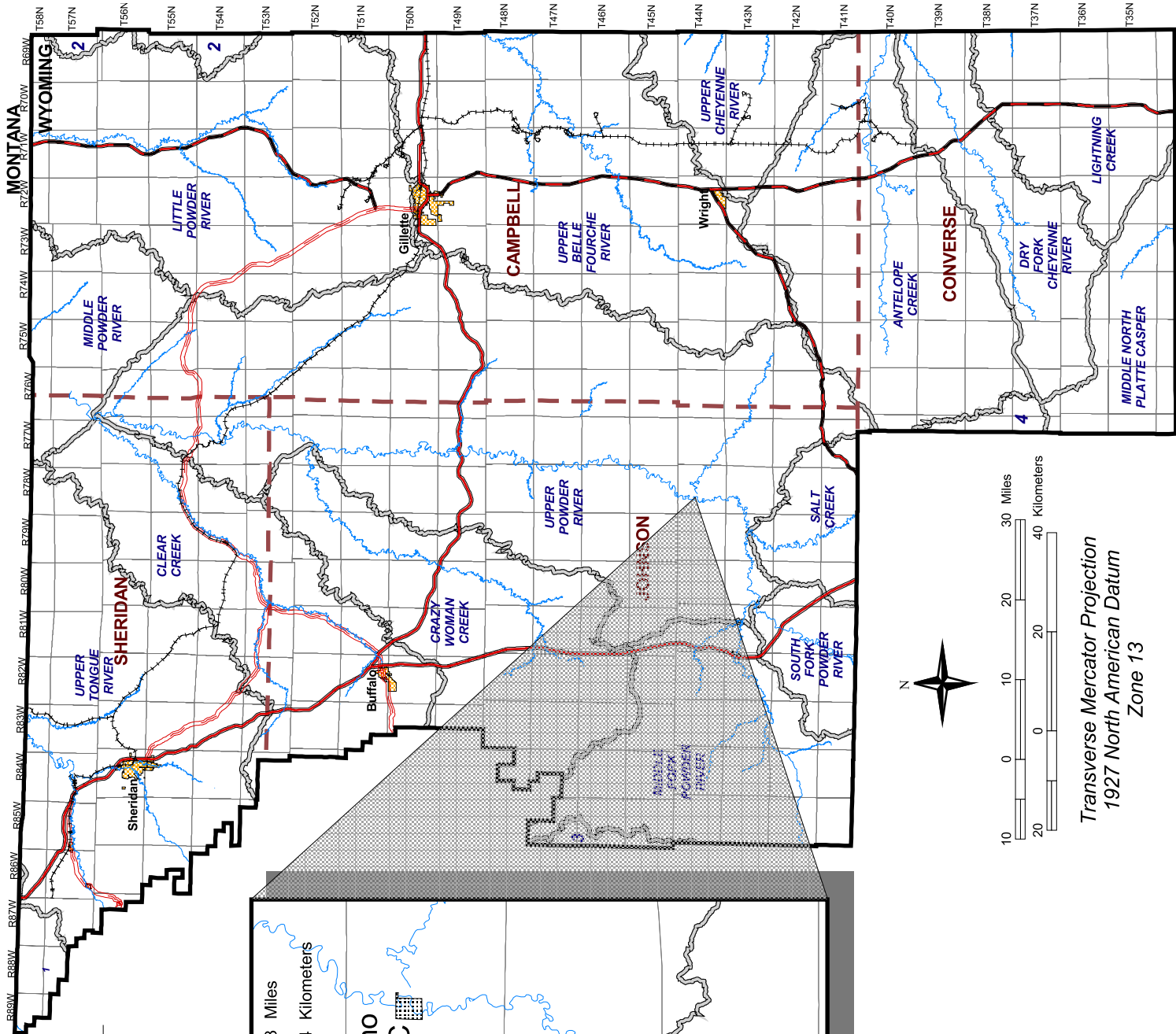
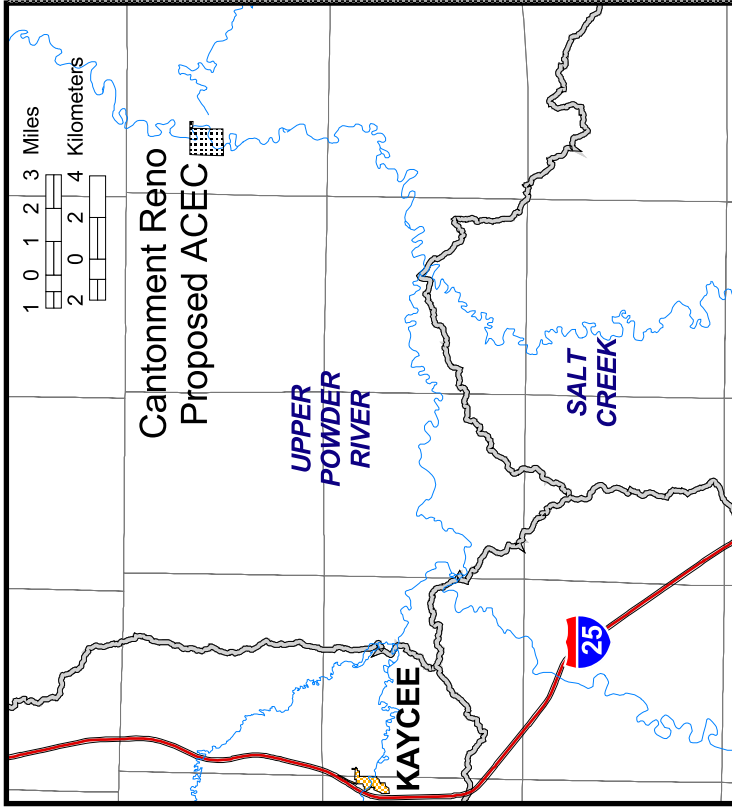


# LEGEND

- Sub-Watershed Boundary
- River/Stream
- Railroad
- Interstate Highway
- U.S. Highway
- State Highway
- County Boundary

## Sub-Watershed

- 1--Little Bighorn River
- 2--Little Missouri River
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- 4--Salt Creek



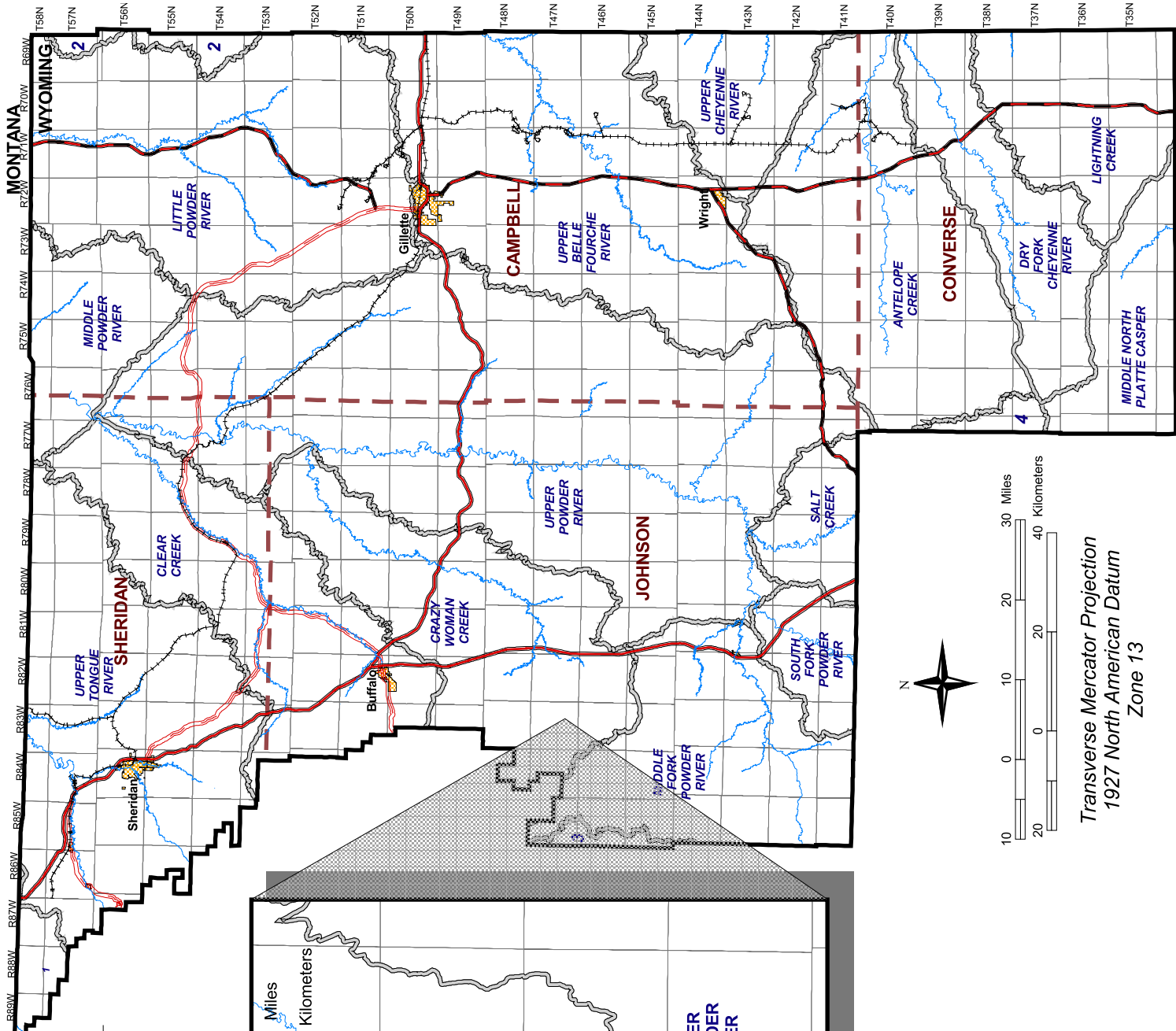
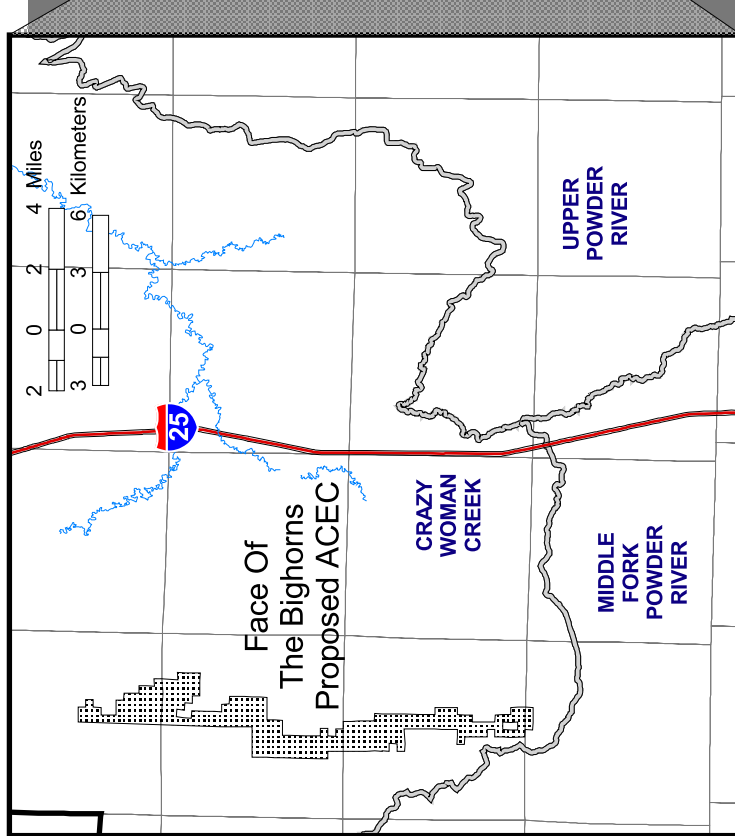
Transverse Mercator Projection  
1927 North American Datum  
Zone 13

POWDER RIVER BASIN OIL & GAS PROJECT FEIS	
FIGURE R-5 CANTONMENT RENO PROPOSED ACEC	
ANALYSIS AREA: Campbell, Converse, Johnson & Sheridan Counties, Wyoming	
DATE: 09/24/02	ArcView File: C:\1011_V1\data\acec.apr Layout--Cantonment Reno
DRAWN BY: MSH	

# LEGEND

- Sub-Watershed Boundary
- River/Stream
- Railroad
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- State Highway
- County Boundary

- Sub-Watershed
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## POWDER RIVER BASIN OIL & GAS PROJECT FEIS

### FIGURE R-6 FACE OF THE BIGHORNS PROPOSED ACEC

ANALYSIS AREA: Campbell, Converse, Johnson & Sheridan Counties, Wyoming	ArcView File: C:\1011_v1\data\acec.apr
DATE: 09/24/02	Layout--Face of the Bighorns
	DRAWN BY: MSH

Transverse Mercator Projection  
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Zone 13

## Hole-In-The-Wall

The Hole-In-The-Wall is an historic site on public land about 20 miles southwest of Kaycee, Wyoming (Figure R–7). The area is famous for outlaws such as “The Wild Bunch” that frequented the area in the late 1800’s. The “Hole” is scenic red rocks uplift that is a frequent destination for tourists. The BLM has implemented several actions recently to protect the site and allow for public access, by creating a public viewing and parking area and trail head, with interpretive signing.

The area meets the relevance criteria for significant historical, cultural or scenic value, and importance criteria for having more than local significant qualities of worth and distinctiveness; qualities that make it unique; and warranting protection to satisfy national priority concerns.

## Cow Creek Breaks

The Cow Creek Breaks entails about 17,000 acres of public land 15 miles north of Gillette, Wyoming (Figure R–8). The land was acquired by BLM through a land exchange completed in 2001. The area is composed of gently rolling sagebrush/grasslands, scoria buttes and clayey escarpments. There are numerous cottonwood ephemeral drainages, with juniper and ponderosa pine covered slopes. Several areas are unroaded due to steep terrain and unstable soils. BLM is in the process of developing a plan with local groups interested in the area.

The area meets relevance criteria for scenic value, and natural hazards due to steep erosive soils and flooding potential. The area meets the importance criteria for local significant qualities (recreational access); warrants protection to satisfy national priority concerns; and public or management concerns about safety and property.

The findings presented herein do not represent a final decision of the BLM. Thus, they cannot be protested or appealed at this time. These findings may be protested (under 43 CFR part 1610) when the BLM issues a formal decision to designate an ACEC (within a land use planning process) or when BLM issues a notice or decision that ACEC designation is not warranted and no formal plan amendment process will occur.

To officially designate those portions of the area found to meet the criteria, a land use plan or plan amendment must be prepared to delineate the official boundary and to specify the special management direction needed to protect the relevant/important resource values. The implementation schedule for pursuing ACEC designation depends on future availability of planning funds and the land use planning workload priorities within each state.

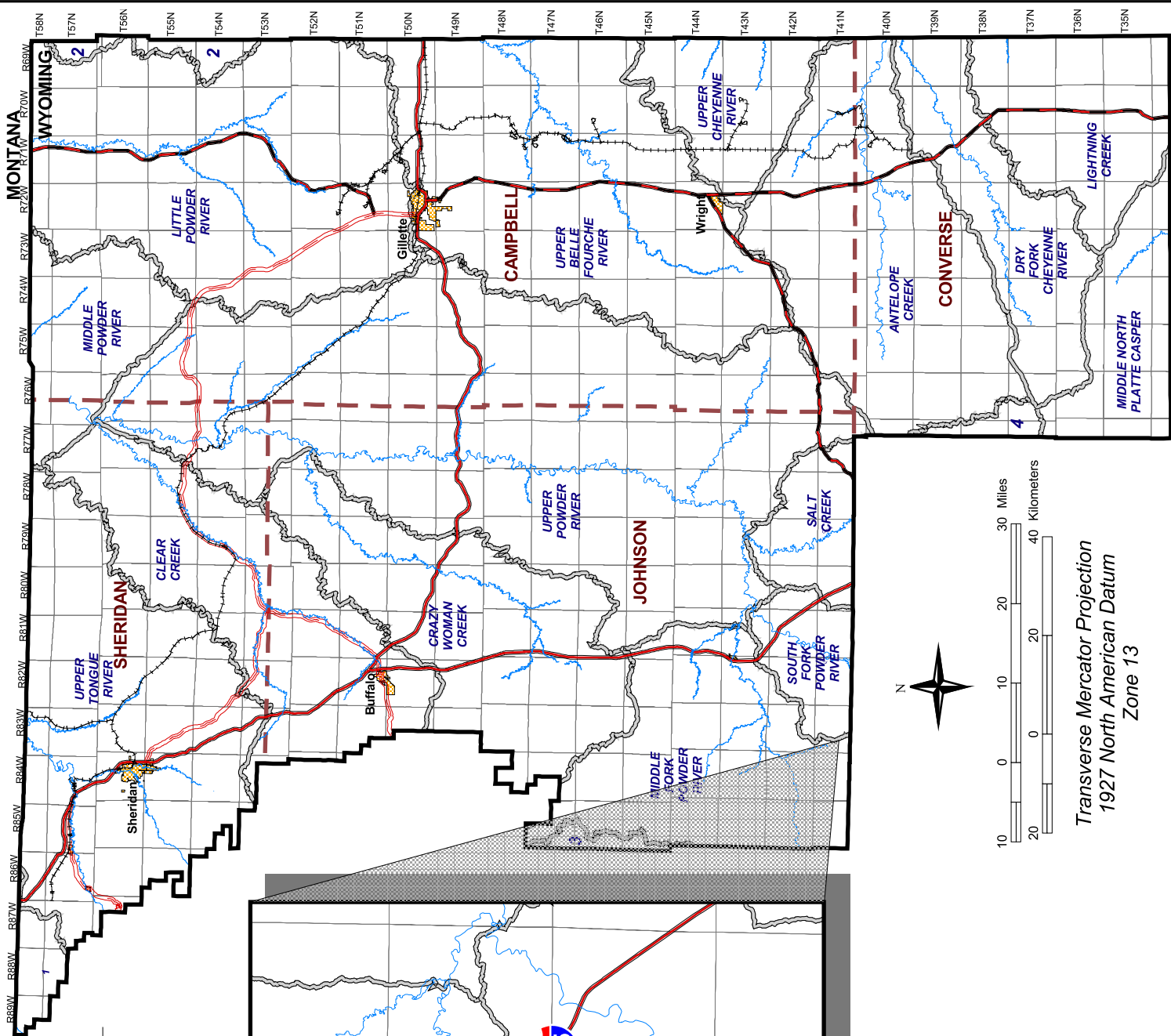
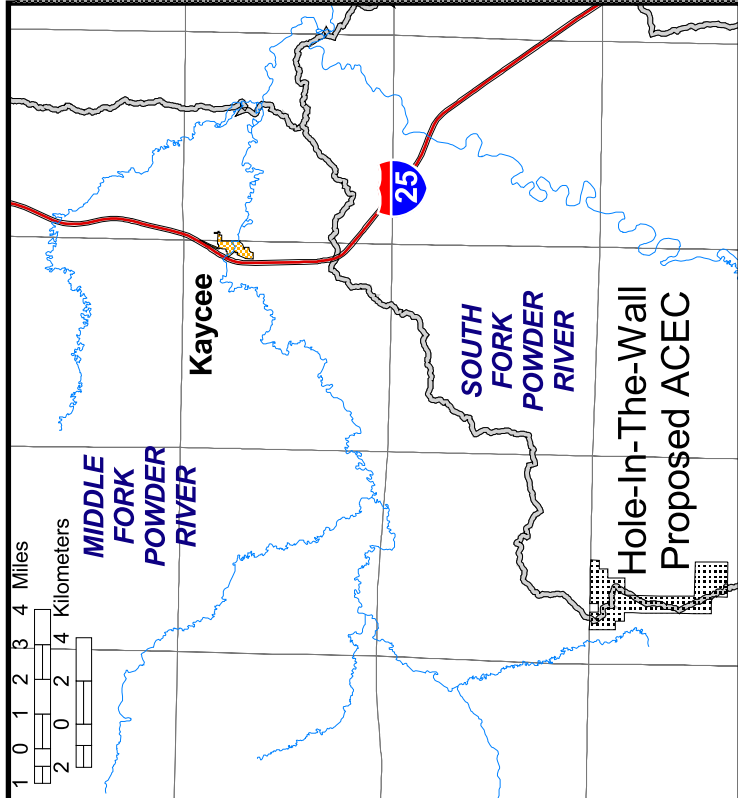
BLM manual 1613 provides for the option of specifying “interim management direction” to protect sensitive resources or ecosystem functions until such time as the land use planning process can be completed. No special Interim management direction is necessary if current management is adequate or flexible enough to protect relevant/important values present until the land use planning process can be completed.

# LEGEND

- Sub-Watershed Boundary
- River/Stream
- Railroad
- Interstate Highway
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- State Highway
- County Boundary

- Sub-Watershed
- 1--Little Bighorn River
  - 2--Little Missouri River
  - 3--North Fork Powder River
  - 4--Salt Creek

1 0 1 2 3 4 Miles  
2 0 2 4 Kilometers



10 20 30 Miles  
20 40 Kilometers

Transverse Mercator Projection  
1927 North American Datum  
Zone 13

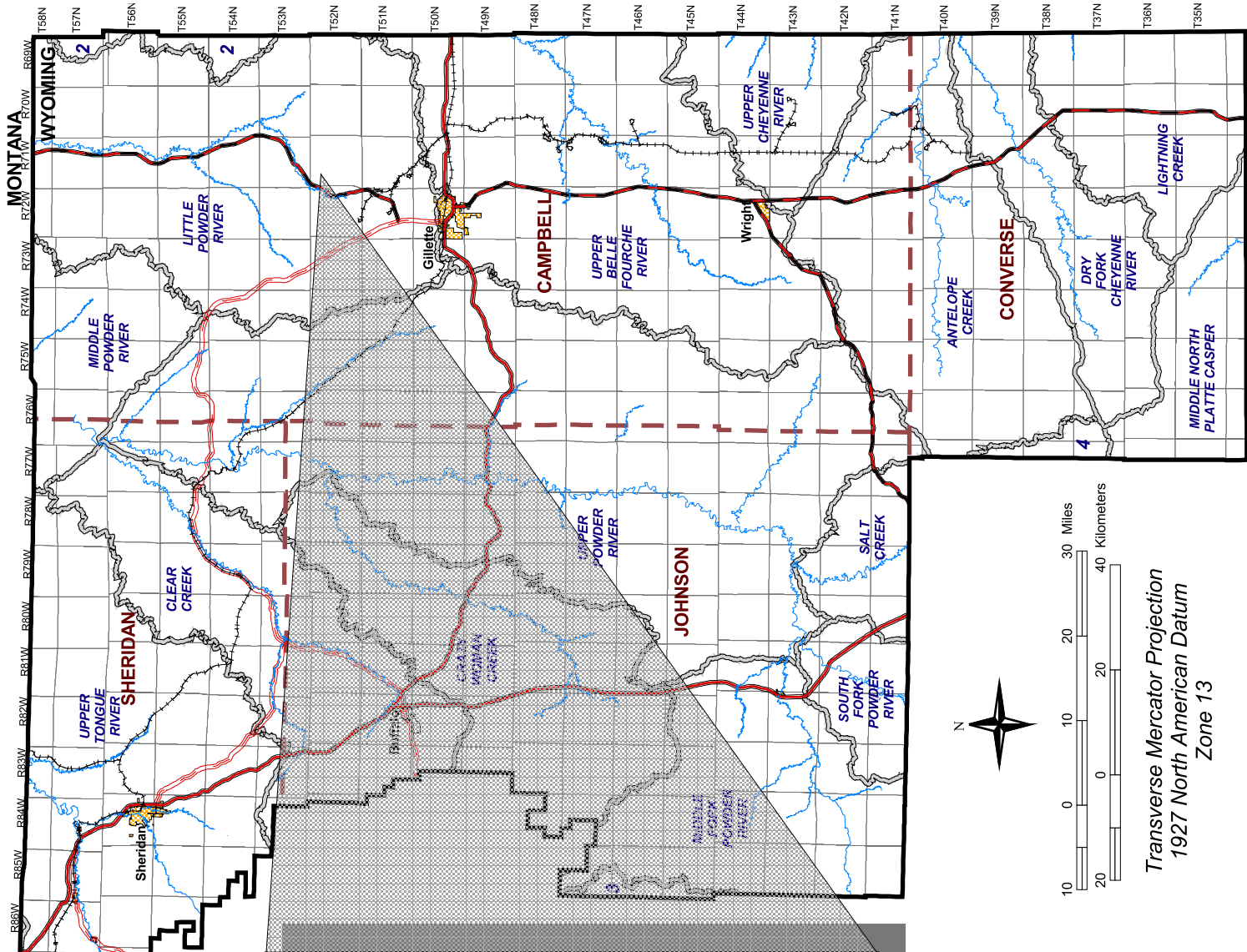
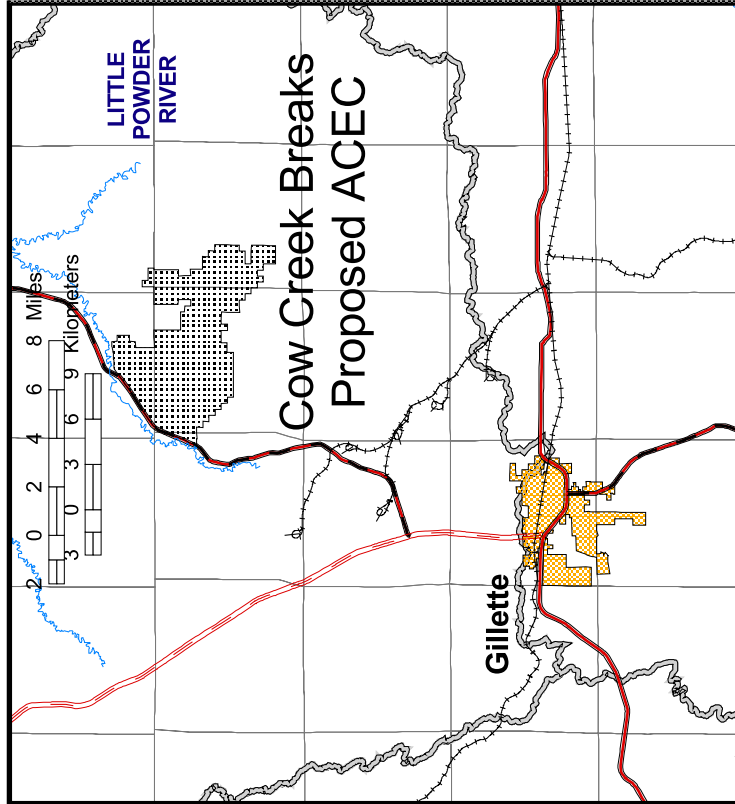
## POWDER RIVER BASIN OIL & GAS PROJECT FEIS

### FIGURE R-7 HOLE-IN-THE-WALL PROPOSED ACEC

ANALYSIS AREA: Campbell, Converse, Johnson & Sheridan Counties, Wyoming	
DATE: 09/24/02	ArcView File: C:\1011_v1\data\acec.apr Layout--Hole in Wall
DRAWN BY: MSH	

# LEGEND

- Sub-Watershed Boundary
- River/Stream
- Railroad
- Interstate Highway
- U.S. Highway
- State Highway
- County Boundary
- 1--Little Bighorn River
- 2--Little Missouri River
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- 4--Salt Creek



POWDER RIVER BASIN OIL & GAS PROJECT FEIS	
FIGURE R-8 COW CREEK BREAKS PROPOSED ACEC	
ANALYSIS AREA: Campbell, Converse, Johnson & Sheridan Counties, Wyoming	
DATE: 09/24/02	ArcView File: C:\1011_v1\data\acec.apr Layout--60 Bar
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Transverse Mercator Projection  
1927 North American Datum  
Zone 13



Although formal comments are not requested at this time, any future land use planning process addressing these areas will provide an opportunity for the public to provide comments on the findings in this evaluation. A decision to not designate part or all of the proposed area as an ACEC does not require the preparation of a plan amendment and is exempt from NEPA. However, any party adversely affected by a subsequent decision to designate or not designate part or all of the proposed area as an ACEC will have an opportunity to protest in accordance with 43 CFR part 1610 at the point in time the decision is proposed.

Table R–2 shows the known or no threats to the proposed ACEC designation.

**Table R–2 Proposed ACEC Determination of Powder River Basin EIS**

Proposed ACEC	Current Mitigation Related To Oil And Gas Development And Other Protection Measures In Place.	Interim Management Needed As A Result Of Affects From Development Proposed In The Powder River Basin EIS
Pumpkin Buttes	Proposed mitigation from the EIS, programmatic mitigation brought forward and standard conditions of approval can be applied at APD approval.	No interim management direction is necessary to protect resource values.
Dry Creek Petrified tree	Forty acre parcel designated as “No surface occupancy” from oil and gas activity. Area fenced to prevent impacts from grazing. Trail and outhouse limit impacts from recreation. Proposed mitigation from the EIS, programmatic mitigation brought forward and standard conditions of approval can be applied at APD approval. .	No interim management direction is necessary to protect resource values.
Cantonment Reno	“No surface occupancy from oil and gas activity on 480 acres. No public access to site prevents recreational overuse. Existing management adequate to protect relevant/important values present until the land use planning process can be completed. Proposed mitigation from the EIS, programmatic mitigation brought forward and standard conditions of approval can be applied at APD approval. .	No interim management direction is necessary to protect resource values.
Hole-In-The-Wall	Area outside of CBM development area. Protected with “NSO” designation. Developed hiking trail protects area from OHV impacts. Adequate grazing management direction.	No interim management direction is necessary to protect resource values.
Fortification Creek Area.	No oil and gas leasing is a part of the interim management for the WSA. The area outside of the WSA is leased with controlled surface use and timing limit stipulations for elk. Adequate measures exist to protect the value of the area from livestock grazing. Limited public access prevents OHV impacts. Proposed mitigation from the EIS, programmatic mitigation brought forward and standard conditions of approval can be applied at APD approval.	No interim management direction is necessary to protect resource values.
Cow Creek breaks	The area is outside of CBM development area. A coordinated activity plan is being developed to establish management objectives for the area. Proposed mitigation from the EIS, programmatic mitigation brought forward and standard conditions of approval can be applied at APD approval.	No interim management direction is necessary to protect resource values.